

We claim:

1. A polypeptide selected from the group consisting of SEQ ID NOs: 1 to 148, and functionally equivalent fragments, derivatives, and variants thereof.
2. The polypeptide of claim 1, wherein said polypeptide is selected from the group consisting of SEQ ID NOs: 1, 2, 3, 4, 5, 112, 113, 114, 115, and 116.
3. An antibody which binds specifically to the polypeptide of claim 1.
4. The antibody of claim 3, wherein said antibody is a polyclonal antibody.
5. The antibody of claim 3, wherein said antibody is a monoclonal antibody.
6. An antibody which binds specifically to the polyethylene glycol.
7. The antibody of claim 6, wherein said antibody is a polyclonal antibody.
8. The antibody of claim 6, wherein said antibody is a monoclonal antibody.
9. A method for detecting a polypeptide selected from the group consisting of SEQ ID NOs: 1 to 148 in a sample comprising:
  - a. contacting the sample with an antibody of claim 3 or claim 6,
  - b. detecting said antibody, and
  - c. correlating the detection of antibody with the amount of polypeptide in the sample.
10. A method for detecting a polypeptide selected from the group consisting of SEQ ID NOs: 1 to 148 in a sample comprising:
  - a. contacting the sample with a first antibody of claim 3 or claim 6,
  - b. contacting the sample with a second labeled antibody, wherein the second antibody binds to the first antibody,
  - c. detecting the label, and
  - d. correlating the detection of label with the amount of polypeptide in the sample.
11. A kit for detecting a polypeptide selected from the group consisting of SEQ ID NOs: 1 to 148 in a sample comprising: a first antibody of claim 3 or claim 6 and a second antibody wherein the second antibody binds to the first antibody.
12. A pharmaceutical composition comprising a therapeutically effective amount of a polypeptide of claim 1, or functionally equivalent fragments, derivatives, and variants thereof, in combination with a pharmaceutically acceptable carrier.
13. The pharmaceutical composition of claim 12, wherein said polypeptide is selected from the

group consisting of SEQ ID NOs: 1, 2, 3, 4, 5, 112, 113, 114, 115, and 116.

14. A pharmaceutical composition comprising a therapeutically effective amount of a polypeptide of claim 1, or functionally equivalent fragments, derivatives, and variants thereof, in combination with a pharmaceutically acceptable carrier and one or more pharmaceutical agents.
15. The pharmaceutical composition of claim 14, wherein said pharmaceutical agent is selected from the group consisting of PPAR ligands, insulin secretagogues, sulfonylurea drugs,  $\alpha$ -glucosidase inhibitors, insulin sensitizers, hepatic glucose output lowering compounds, insulin and insulin derivatives, biguanides, protein tyrosine phosphatase-1B, dipeptidyl peptidase IV, 11 $\beta$ -HSD inhibitors, anti-obesity drugs, HMG-CoA reductase inhibitors, nicotinic acid, lipid lowering drugs, ACAT inhibitors, bile acid sequestrants, bile acid reuptake inhibitors, microsomal triglyceride transport inhibitors, fibric acid derivatives,  $\beta$ -blockers, ACE inhibitors, calcium channel blockers, diuretics, renin inhibitors, AT-1 receptor antagonists, ET receptor antagonists, neutral endopeptidase inhibitors, vasopeptidase inhibitors, and nitrates.
16. A composition comprising an effective amount of a polypeptide of claim 1, or functionally equivalent fragments, derivatives, and variants thereof, in combination with an inert carrier.
17. A method of treating diabetes comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
18. The method of claim 17, wherein said diabetes is selected from the group consisting of type 2 diabetes, maturity-onset diabetes of the young, latent autoimmune diabetes adult, and gestational diabetes.
19. A method of treating Syndrome X comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
20. A method of treating diabetes-related disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
21. The method of claim 20, wherein said diabetes-related disorder is selected from the group consisting of hyperglycemia, hyperinsulinemia, impaired glucose tolerance, impaired fasting glucose, dyslipidemia, hypertriglyceridemia, and insulin resistance.
22. A method of treating diabetes comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 in combination with one

or more pharmaceutical agents.

23. The method of claim 20, wherein said pharmaceutical agent is selected from the group consisting of PPAR agonists, sulfonylurea drugs, non-sulfonylurea secretagogues,  $\alpha$ -glucosidase inhibitors, insulin sensitizers, insulin secretagogues, hepatic glucose output lowering compounds, insulin, and anti-obesity agents.
24. The method of claim 23, wherein said diabetes is selected from the group consisting of type 2 diabetes, maturity-onset diabetes of the young, latent autoimmune diabetes adult, and gestational diabetes.
25. A method of treating Syndrome X comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 in combination with one or more pharmaceutical agents.
26. The method of claim 25, wherein said pharmaceutical agent is selected from the group consisting of PPAR agonists, sulfonylurea drugs, non-sulfonylurea secretagogues,  $\alpha$ -glucosidase inhibitors, insulin sensitizers, insulin secretagogues, hepatic glucose output lowering compounds, insulin, and anti-obesity agents.
27. A method of treating diabetes-related disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 in combination with one or more pharmaceutical agents.
28. The method of claim 27, wherein said diabetes-related disorder is selected from the group consisting of hyperglycemia, hyperinsulinemia, impaired glucose tolerance, impaired fasting glucose, dyslipidemia, hypertriglyceridemia, and insulin resistance.
29. The method of claim 28, wherein said pharmaceutical agent is selected from the group consisting of PPAR agonists, sulfonylurea drugs, non-sulfonylurea secretagogues,  $\alpha$ -glucosidase inhibitors, insulin sensitizers, insulin secretagogues, hepatic glucose output lowering compounds, insulin, and anti-obesity agents.
30. A method of treating diabetes, Syndrome X, or diabetes-related disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 in combination with one or more agents selected from the group consisting of HMG-CoA reductase inhibitors, nicotinic acid, lipid lowering drugs, ACAT inhibitors, bile acid sequestrants, bile acid reuptake inhibitors, microsomal triglyceride transport inhibitors, fibric acid derivatives,  $\beta$ -blockers, ACE inhibitors, calcium channel blockers, diuretics, renin inhibitors, AT-1 receptor antagonists, ET receptor antagonists, neutral endopeptidase inhibitors, vasopeptidase inhibitors, and nitrates.

31. The method of claim 30, wherein said diabetes-related disorder is selected from the group consisting of hyperglycemia, hyperinsulinemia, impaired glucose tolerance, impaired fasting glucose, dyslipidemia, hypertriglyceridemia, and insulin resistance.
32. The method of any one of claims 22 to 31, wherein the polypeptide of claim 1 and one or more pharmaceutical agents are administered as a single pharmaceutical dosage formulation.
33. A method of treating or preventing secondary causes of diabetes comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
34. The method of claim 33, wherein said secondary cause is selected from the group consisting of glucocorticoid excess, growth hormone excess, pheochromocytoma, and drug-induced diabetes.
35. A method of treating or preventing secondary causes of diabetes comprising the step of administering a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 in combination with one or more pharmaceutical agents.
36. The method of claim 35, wherein said pharmaceutical agent is selected from the group consisting of PPAR agonists, sulfonylurea drugs, non-sulfonylurea secretagogues,  $\alpha$ -glucosidase inhibitors, insulin sensitizers, insulin secretagogues, hepatic glucose output lowering compounds, insulin, and anti-obesity agents.
37. A method of treating respiratory disease comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
38. A method of treating obesity comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
39. A method of treating cardiovascular disease comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
40. The method of claim 39, wherein said cardiovascular disease is selected from atherosclerosis, coronary heart disease, coronary artery disease, and hypertension.
41. A method of treating disorders of lipid and carbohydrate metabolism comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.

42. A method of treating sleep disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
43. A method of treating male reproductive disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
44. A method of treating growth disorders or disorders of energy homeostasis comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
45. A method of treating immune diseases comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
46. A method of treating autoimmune diseases comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
47. A method of treating acute and chronic inflammatory diseases comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
48. A method of treating septic shock comprising the step of administering to a subject in need thereof a therapeutically effective amount of a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
49. A method of stimulating insulin release in a glucose-dependent manner in a subject in need thereof by administering to said subject a polypeptide of claim 1 or a pharmaceutical composition of claim 12.
50. Polypeptides according to claim 1 for the treatment and/or prophylaxis of diabetes and diabetes-related disorders.
51. Medicament containing at least one polypeptide according to claim 1 in combination with at least one pharmaceutically acceptable, pharmaceutically safe carrier or excipient.
52. Use of polypeptides according to claim 1 for manufacturing a medicament for the treatment and/or prophylaxis of diabetes and diabetes-related disorders.
53. Medicament according to claim 51 for the treatment and/or prophylaxis of diabetes.

SEQ ID NO	Sequence
1	Ac-HSDAVFTDQYTRLRKQVAAKKYLQSIKQKRY
2	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKRY
3	Ac-HSDAVFTDQYTRLRKQVAAKKYLQSIKQK
4	Ac-HTEAVFTDQYTRLRKQVAAKKYLQSIKQKRY
5	Ac-HSDAVFTDQYTRLRKQLAVKKYLQDIKQGGT
6	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKR
7	Ac-HSDAVFTDQYTRLRKQLAAKKYLQTIKQKRY
8	Ac-HSDAVFTDQYTRLRKQMAAKKYLQTIKQKRY
9	Ac-HSDAVFTDQYTRLRKQMAAHKYLQSIKQKRY
10	Ac-HSDAVFTDQYTRLRKQMAAKHYLQSIKQKRY
11	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSIKQKR
12	Ac-HSDAVFTDQYTRLRKQMAKKKYLQSIKQKR
13	Ac-HSDAVFTDQYTRLRKQMARKKYLQSIKQKR
14	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIKQKR
15	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIPOKR
16	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIQOKR
17	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIROKR
18	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQRR
19	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKA
20	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKF
21	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKH
22	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKI
23	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKK
24	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKL
25	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKM
26	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKP
27	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKQ
28	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKS
29	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKT
30	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKV
31	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKW
32	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIKQKY
33	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSIKQRI
34	Ac-HSDAVFTDQYTRLRKQMAKKKYLQSIKQRI
35	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIKQRI
36	Ac-HSDAVFTDQYTRLRKQMAAKKYLQSIPORI
37	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIRORI

FIG. 1a

SEQ ID NO	Sequence
38	Ac-HSDAVFTDNYTRLRKQVAAKKYLQSIKQKRY
39	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKRY
40	Ac-HSDAVFTDNYTRLRKQVAAKKYLQSIKQK
41	Ac-HTEAVFTDNYTRLRKQVAAKKYLQSIKQKRY
42	Ac-HSDAVFTDNYTRLRKQLAVKKYLQDIKQGGT
43	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKR
44	Ac-HSDAVFTDNYTRLRKQLAAKKYLQTIKQKRY
45	Ac-HSDAVFTDNYTRLRKQMAAKKYLQTIKQKRY
46	Ac-HSDAVFTDNYTRLRKQMAAHKYLQSIKQKRY
47	Ac-HSDAVFTDNYTRLRKQMAAKHYLQSIKQKRY
48	Ac-HSDAVFTDNYTRLRKQMAGKKYLQSIKQKR
49	Ac-HSDAVFTDNYTRLRKQMAKKKYLQSIKQKR
50	Ac-HSDAVFTDNYTRLRKQMARKKYLQSIKQKR
51	Ac-HSDAVFTDNYTRLRKQMASKKYLQSIKQKR
52	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIPOKR
53	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIQOKR
54	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIROKR
55	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQRR
56	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKA
57	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKF
58	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKH
59	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKI
60	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKK
61	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKL
62	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKM
63	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKP
64	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKQ
65	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKS
66	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKT
67	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKV
68	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKW
69	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIKQKY
70	Ac-HSDAVFTDNYTRLRKQMAGKKYLQSIKQRI
71	Ac-HSDAVFTDNYTRLRKQMAKKKYLQSIKQRI
72	Ac-HSDAVFTDNYTRLRKQMASKKYLQSIKQRI
73	Ac-HSDAVFTDNYTRLRKQMAAKKYLQSIPORI
74	Ac-HSDAVFTDNYTRLRKQMASKKYLQSIRORI

FIG. 1b

SEQ ID NO	Sequence
75	Ac-HSDAVFTDQYTRLRKQVAACKYLQSIKNKRY
76	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKNKRY
77	Ac-HSDAVFTDQYTRLRKQVAACKYLQSIKNK
78	Ac-HTEAVFTDQYTRLRKQVAACKYLQSIKNKRY
79	Ac-HSDAVFTDQYTRLRKQLAVKKYLDIKNGGT
80	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKNKR
81	Ac-HSDAVFTDQYTRLRKQLAACKYLQTIKNKRY
82	Ac-HSDAVFTDQYTRLRKQMAACKYLQTIKNKRY
83	Ac-HSDAVFTDQYTRLRKQMAAHKYLQSIKNKRY
84	Ac-HSDAVFTDQYTRLRKQMAAKHYLQSIKNKRY
85	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSIKNKR
86	Ac-HSDAVFTDQYTRLRKQMAKKYLQSIKNKR
87	Ac-HSDAVFTDQYTRLRKQMARKKYLQSIKNKR
88	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIKNKR
89	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI PNKR
90	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI QNKR
91	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI RNKR
92	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNRR
93	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKA
94	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKF
95	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKH
96	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKI
97	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKK
98	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKL
99	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKM
100	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKP
101	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKQ
102	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKS
103	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKT
104	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKV
105	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKW
106	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI KNKY
107	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSI KNRI
108	Ac-HSDAVFTDQYTRLRKQMAKKYLQSI KNRI
109	Ac-HSDAVFTDQYTRLRKQMASKKYLQSI KNRI
110	Ac-HSDAVFTDQYTRLRKQMAACKYLQSI PNRI
111	Ac-HSDAVFTDQYTRLRKQMASKKYLQSI RNRI

FIG. 1c



SEQ ID NO	Sequence
112	Ac-HSDAVFTDQYTRLRKQVAACKYLQSIKQKRYC-PEG
113	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKRYC-PEG
114	Ac-HSDAVFTDQYTRLRKQVAACKYLQSIKQKRC-PEG
115	Ac-HTEAVFTDQYTRLRKQVAACKYLQSIKQKRYC-PEG
116	Ac-HSDAVFTDQYTRLRKQLAVKKYLQDIKQGGTC-PEG
117	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKRC-PEG
118	Ac-HSDAVFTDQYTRLRKQLAAKKYLQTIKQKRYC-PEG
119	Ac-HSDAVFTDQYTRLRKQMAACKYLQTIKQKRYC-PEG
120	Ac-HSDAVFTDQYTRLRKQMAAHKKYLQSIKQKRYC-PEG
121	Ac-HSDAVFTDQYTRLRKQMAAKHYLQSIKQKRYC-PEG
122	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSIKQKRC-PEG
123	Ac-HSDAVFTDQYTRLRKQMAKKYLQSIKQKRC-PEG
124	Ac-HSDAVFTDQYTRLRKQMARKKYLQSIKQKRC-PEG
125	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIKQKRC-PEG
126	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIPOKRC-PEG
127	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIQKRC-PEG
128	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIQKRC-PEG
129	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQRRRC-PEG
130	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKAC-PEG
131	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKFC-PEG
132	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKHC-PEG
133	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKIC-PEG
134	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKKC-PEG
135	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKLC-PEG
136	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKMC-PEG
137	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKPC-PEG
138	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKQC-PEG
139	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKSC-PEG
140	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKTC-PEG
141	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKVC-PEG
142	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKWC-PEG
143	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIKQKYC-PEG
144	Ac-HSDAVFTDQYTRLRKQMAGKKYLQSIKQRIC-PEG
145	Ac-HSDAVFTDQYTRLRKQMAKKKYLQSIKQRIC-PEG
146	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIKQRIC-PEG
147	Ac-HSDAVFTDQYTRLRKQMAACKYLQSIPORIC-PEG
148	Ac-HSDAVFTDQYTRLRKQMASKKYLQSIQRIC-PEG

FIG. 1d

SEQ ID NO	Sequence
149	HSDGIFTDSYSRYRKQMAVKKYLA AVL GKRYKQ RVKNK (PACAP38)
150	HSDGIFTDSYSRYRKQMAVKKYLA AVL (PACAP27)
151	HSDAVFTDNYTRLRKQMAVKKYLNSILN (VIP)
152	HSDAVFTDQYTRLRKQVA AKKYLSIKQKRY
153	Ac-HTDAVFTDQYTRLRKQVA AKKYLSIKQKRY
154	HSDAVFTDQYTRLRKQVA AKKYLSIKQKRYC-PEG
155	Ac-HTDAVFTDQYTRLRKQVA AKKYLSIKQKRYC-PEG

FIG. 1e